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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/787,831	06/15/2001	Catia Bastioli	13929/123411	7489

7590 03/09/2004

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EXAMINER
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RAJGURU, UMAKANT K

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 03/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

AS

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/787,831	BASTIOLI ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Umakant K. Rajguru	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 31 July 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 24-56 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 24-56 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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1. An RCE has been filed on July 31, 2003
2. Claims being examined are 24,25, 27, 36 & 41-56
3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 41, 42, 48, 28, 35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 41, 42 & 48 are indefinite in depending from claims 40 & 39, which are cancelled.

Claim 28 is indefinite because it is not known what is cited percentage is based on.

Claim 35 is indefinite because it is not known which derivatives are envisioned.

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
6. Claims 24, 25, 28, 29, 34, 36, and 41-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bastioli et al (EP 0965615) in viewing Corvasce et al (EP 0795581) (both references have been cited in earlier office action).

Bastioli'615 discloses complexed starch-containing compositions having high mechanical properties. Starch forms complexes with synthetic polymers such as polyethylene, vinyl alcohol or polyethylene acid acrylate (p. 2, lines 46 –47) and such complex acts as a compatibility- inducer or phasing agent.

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Bastioli mentions, besides starch and polymers, some interfacial agents on page 4, lines 37-49. These agents can be looked upon as (instantly claimed) complexing agents.

*WR* Bastioli however does not mention (claimed) <sup>coupling</sup> coupling agent as part of starch complex.

Corvasce discloses a rubber composition containing a starch/plasticizer composite, an elastomer, optionally a coupler and optionally a carbon black as well as silica (abstract). On page 2, line 53 to page 3, line 16, several suitable coupling agents are mentioned. They read on those that are instantly claimed.

Therefore, it would have been obvious from the teachings of Corvasce, to use coupling agent/s in the composition of Bastioli '615 in order to improve mechanical strength of the product made out of that composition.

7. Claim 27 rejected under 35 U.S.C. 103(a) as being unpatentable over Bastioli et al (EP 095615) in view of Corvasce et al (EP 0795581) as applied to claim 24 above, and further in view of Sun et al (US 6211325).

Bastioli together with Corvasce fails to mention the complexing agent of instant claim 27.

Sun discloses high strength plastic from reactive blending of starch and polylactic acids. It can be seen that polylactic acid reacts with starch to form a product or a complex thereby resulting in a material possessing enhanced strength. Therefore it would have been obvious to use polylactic acid (as a complexing agent) in the composition of Bastioli to enhance strength.

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8. Claims 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bastioli et al (EP 0965615) in view of Corvasce et al (EP 0795581) as applied to claim 24 & 30 above, and further in view of Otey et al (US 41337584) and Bastioli et al (EP 37589)

Bastioli '615 together with Corvasce fails to mention the (claimed) complexing agents.

Otey discloses composition prepared from starch & copolymers of ethylene and acrylic acid.

Bastioli '589 discloses composition containing starch and copolymer of ethylene and vinyl acetate,

*QWR* Therefore it would have been obvious to use in the composition of Bastioli '615, ethylene-acrylic acid copolymer and/or ethylene-vinyl acetate copolymers as alternate moieties and still produce composition having high mechanical properties.

9. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bastioli et al (EP 0965615) in view of Corvasce et al (EP 0795581) applied to claim 24 above, and further in view of Hoover et al (US 5650454).

Bastioli together with Corvasce fails to disclose (claimed) fatty acid or its derivative.


According to Hoover, an additive comprising crosslinked fatty acid & starch provides increased tear resistance when mixed with a rubber compound.


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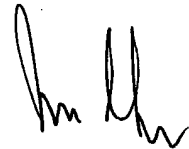
Therefore it could have been obvious to use a fatty acid for reacting with starch in the composition of Bastioli with the expectation of increasing mechanical properties of the product such as films, bags made out of that composition.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to U. K. Rajguru, whose telephone number is (571) 272-1077. The examiner can normally be reached on Monday-Friday from 9:30 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

 ~~Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.~~

  
U. k. Rajguru/af  
February 11, 2004

  
James J. Seidleck  
Supervisory Patent Examiner  
Technology Center 171